We Claim:

1. A method for filling a mold to make a cast article comprising the steps of:

providing a molten metal to a casting chamber in fluid communication with the mold, the casting chamber having a supply conduit for introducing a gas into the casting chamber, and the casting chamber having an evacuation conduit for delivering the molten metal from the casting chamber to the mold;

controlling the filling of the mold during a first time interval by delivering the molten metal from the casting chamber to the mold at a first rate; and

controlling the filling of the mold during a second time interval by delivering the molten metal from the casting chamber to the mold at a second rate,

wherein the filling of the mold decelerates from the first rate to the second rate and the second rate does not exceed the first rate.

2. The method of claim 1 further comprising a providing a controller for controlling the first rate and the second rate.

3. A vehicle component produced in accord with the method of claim 1.

4. A method for filling a mold to make a cast article comprising the steps of:

providing a molten metal to a casting chamber, the casting chamber having a supply conduit for introducing a gas into the casting chamber, and the casting chamber having an evacuation conduit for delivering the molten metal from the casting chamber to the mold;

providing a transducer and a controller;

during a first time interval controlling the filling of the mold by introducing the gas into the casting chamber at a first rate; and

during a second time interval controlling the filling of the mold by introducing the gas into the casting chamber at a second rate,

wherein the transducer sends a signal representative of the pressure in the casting chamber and the controller changes the filling of the mold from the first rate to the second rate.

5. A vehicle component produced in accord with the method of claim 4.

6. A method for filling a mold to make a cast article comprising the steps of:

providing a molten metal to a casting chamber, the casting chamber having a supply conduit for introducing a gas into the casting chamber, and the casting chamber having an evacuation conduit for delivering the molten metal from the casting chamber to the mold;

providing a desired fill profile for delivering the molten metal from the casting chamber to the mold;

detecting the pressure in the casting chamber;

providing a controller and sending a signal representative of the pressure in the casting chamber to the controller; and

changing the desired fill profile based upon the signal representative of the pressure in the casting chamber.

7. The method of claim 6 further comprising the step of providing a transducer to detect the pressure in the casting chamber.

8. The method of claim 6 further comprising the step of providing the molten metal to a casting chamber at a second rate based upon the signal representative of the pressure in the casting chamber.

9. A vehicle component produced in accord with the method of claim 6.